

**REMARKS**

Upon entry of this Amendment, claims 3-20, 23-25, 27, 28, 30-32, 37, 39, 45, 47, and 49-133 remain pending, with claims 49-131 withdrawn from consideration as drawn to a nonelected invention. In the Office Action,<sup>1</sup> the Examiner took the following actions;

- (a) rejected claims 35-40 and 43-48 under 35 U.S.C. § 112, first paragraph;
- (b) rejected claims 35-40 and 43-48 under 35 U.S.C. § 112, second paragraph;
- (c) maintained the rejection of claims 23-25 and 27 under 35 U.S.C. § 102(b) as being anticipated by Ema (U.S. Patent No. 6,372,413);
- (d) rejected claims 23-25, 27, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Kosa (U.S. Patent App. Pub. No. 2001/0018168) in view of Ema;
- (e) maintained the rejection of claims 35-39, 40, 43-45, 47, and 48 under 35 U.S.C. § 103(a) as being obvious over Takahashi (U.S. Patent No. 6,818,387) in view of Ema;
- (f) allowed claims 3-20, 132, and 133;
- (g) objected to claims 26, 29-32, and 38 as being dependent upon a rejected base claim, but allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims; and
- (h) stated that claim 46 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, 2nd paragraph.

Applicants traverse the objections and rejections for the following reasons.

**Regarding the Information Disclosure Statement (IDS):**

Regarding the IDS, the Examiner crossed out the cited non-English language document WO 99/49504 on the form PTO/SB/08, but provided no explanation as to why the document was not considered. Applicants note that the English-language abstract for WO 99/49504 can be found on the first page of the document and that a full English translation is not readily available

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<sup>1</sup> The Office Action may contain statements characterizing the related art, case law, and claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

to Applicants. This was discussed on page 2 of the IDS filed on October 23, 2006. Applicants have therefore satisfied the requirement of providing “[a] written English language translation of a non-English language document, or portion thereof, *if it is within the possession, custody or control of, or is readily available to any individual designated in 37 CFR 1.56(c).*” M.P.E.P. § 609.01 (emphasis added). Thus, “[o]nce the minimum requirements of 37 CFR 1.97 and 37 CFR 1.98 are met, the examiner has an obligation to consider the information.” M.P.E.P. § 609. Accordingly, Applicants respectfully request that the Examiner consider WO 99/49504, appropriately initial the relevant portion of the PTO/SB/08 form accompanying the IDS filed on October 23, 2006, and return an initialed copy of the PTO/SB/08 form with the next communication from the Office.

**Rejections of Claims 35-40 and 43-48 under 35 U.S.C. § 112, 1st and 2nd ¶¶:**

The 35 U.S.C. § 112, first and second paragraph, rejections of claims 35, 36, 40, 43, 44, and 48 have been rendered moot by the cancellation of these claims, without prejudice or disclaimer of their subject matter.

In the 35 U.S.C. § 112, first paragraph, rejection, the Examiner alleged that claims 35-40 and 43-48 contain “subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) ... had possession of the claimed invention.” Office Action, page 2. Specifically, the Examiner alleged that:

[c]laims 35, 37, 43 and 45 recite forming a pattern of photosensitive resin film by supplying a developing solution to photosensitive resin film of which the surface layer has been slimmed. However these claims previously recited that the photosensitive resin was reformed (not slimmed) and the examiner has been unable to locate any support for this amendment in the original specification. [...] There is no recitation or examples of performing a slimming process prior to development and pattern formation, as recited in the amended claims 35, 37, 43, and 45. Office Action, pp. 2-3.

The above-quoted excerpt from the Office Action appears to imply that both claims 37 and 45 recite *slimming*. Applicants note, however, that claim 37 recites *slimming*, and claim 45 recites *reforming*.

Regarding claim 37, which recites “*slimming* a surface layer...,” Applicants first note that the claimed slimming step may be repeated in the process of the claimed pattern forming method, and that it may be possible to form a pattern after slimming by supplying a developing solution (i.e., one that dissolves the post-slimming reaction product). Ample support for this exists in the specification. *See*, as one example of many, p. 54, lines 12-14. This description is part of the fourth embodiment, for which the flowchart of Fig. 28 applies. In particular, step 405, “emission of 172 nm light” is described on p. 52, lines 14-18, in which the resist pattern is slimmed. This slimming step may be repeated. Moreover, p. 56, line 21 to p. 57, line 6, describes that post-slimming wet processing may cause marked undulation on the resist pattern, thus forming a pattern on the resist film. *See also* p. 59, lines 11-17, which describes that, in the case of removal (regeneration) of a resist film (due to a defect in the resist film), the slimming and developing processes may be repeated. *See also* p. 62, lines 11-14, in the fifth embodiment, describing dissolving an icicle-like reaction product after slimming, in order to obtain the desired pattern. This is explained in greater detail on p. 64, line 16 to p. 65, line 15. Thus, it is possible to form a pattern after slimming by supplying a developing solution (i.e., one that dissolves the

post-slimming reaction product). Claim 37 fully complies with the written description requirement of 35 U.S.C. § 112, first paragraph.

Regarding claim 45, which recites “*reforming* a surface layer...,” the Examiner alleged that “there is not an explanation for what “reforming” actually means in the originally filed specification.” Office Action, p. 3. In response, Applicants note that, for example, step S304 in the flowchart of Fig. 24 is directed to the claimed reforming. A detailed description of reforming step S304 appears on p. 41, lines 6-23. This more than adequately explains what reforming actually means in the originally filed specification. Thus, claim 45 fully complies with the written description requirement of 35 U.S.C. § 112, first paragraph.

In the 35 U.S.C. § 112, second paragraph, rejection, the Examiner rejected claims 35-40 and 43-48 as being indefinite. The body of this rejection, however, refers exclusively to claims 23 and 25. Accordingly, Applicants consider that the Examiner intended to reject claims 23 and 25 under 35 U.S.C. § 112, second paragraph, only, and not claims 35-40 and 43-48. To the extent that the Examiner did intend to rejection claims 35-40 and 43-48 under 35 U.S.C. § 112, second paragraph, Applicants deem such a rejection overcome at least due to the reasoning presented regarding the 35 U.S.C. § 112, first paragraph, rejection.

Regarding claims 23 and 25, the Examiner states that “[c]laims 23 and 25 recite that a reforming of a “pattern” occurs. The language of [claims 23 and 25] does not make it clear that a pattern is formed at this point since a developing step follows. Clarification is required.” Office Action, p. 3. In response, Applicants note that, for example, step S304 in the flowchart of Fig. 24 is directed to the claimed reforming. Prior to step S304 is a first development process step S303. Step S303 is described in detail in the specification at, for example, p. 38, lines 21-26. Thus, a pattern is formed at this point (step S303), followed by reforming (step S304), followed

by a second development process (step S305). A detailed description of reforming step S304 appears on p. 41, lines 6-23. This more than adequately explains what reforming actually means in the originally filed specification. Claims 23 and 25 therefore adequately “meet[] the threshold requirements of clarity and precision” (M.P.E.P. § 2173.02), and are therefore not indefinite.

In view of the foregoing, Applicants respectfully request withdrawal of the rejections of claims 35-40 and 43-48 under 35 U.S.C. § 112, first and second paragraphs. Applicants additionally request withdrawal of the presumed rejection of claims 23 and 25 under 35 U.S.C. § 112, second paragraph.

**Rejection of Claims 23-25 and 27 under 35 U.S.C. § 102(b):**

Applicants traverse the rejection of claims 23-25 and 27 under 35 U.S.C. § 102(b) as being anticipated by Ema. Nevertheless, Applicants have amended independent claims 23 and 25 to include the elements of allowable claims 29 and 26, respectively, followed by cancellation of claims 29 and 26. Accordingly, Applicants deem the 35 U.S.C. § 102(b) rejection overcome and request its withdrawal.

**Rejection of Claims 23-25, 27, and 28 under 35 U.S.C. § 103(a):**

Applicants traverse the rejection of claims 23-25, 27, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Kosa in view of Ema. Nevertheless, Applicants have amended independent claims 23 and 25 to include the elements of allowable claims 29 and 26, respectively, followed by cancellation of claims 29 and 26. Accordingly, Applicants deem the 35 U.S.C. § 103(a) rejection overcome and request its withdrawal.

**Rejection of Claims 35-39, 40, 43-45, 47, and 48 under 35 U.S.C. § 103(a):**

Applicants traverse the rejection of claims 35-39, 40, 43-45, 47, and 48 under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Ema. The rejection of claims 35, 36,

40, 43, 44, and 48 has been rendered moot by their cancellation, without prejudice or disclaimer of their subject matter. Applicants have amended independent claims 37 and 45 to include the elements of allowable claims 38 and 46, respectively, followed by cancellation of claims 38 and 46. Accordingly, Applicants deem the 35 U.S.C. § 103(a) rejection overcome and request its withdrawal.

**Conclusion:**

Applicants submit that the reasoning presented herein in response to the 35 U.S.C. § 112 rejections, coupled with the incorporation of allowable claim 29 into base claim 23, allowable claim 26 into base claim 25, allowable claim 38 into base claim 37, and allowable claim 46 into claim 45, renders the entire application in condition for allowance. Applicants therefore request reconsideration of the application and withdrawal of the rejections. Pending claims 3-20, 23-25, 27, 28, 30-32, 37, 39, 45, 47, 132, and 133 are in condition for allowance, and Applicants request a favorable action.

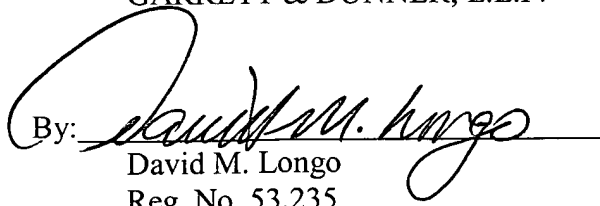
If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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